BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

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Order Instituting Rulemaking to Develop an Electricity Integrated Resource Planning Framework and to Coordinate and Refine Long-Term Procurement Planning Requirements.	Filed Public Utilities Commission February 11, 2016 San Francisco, CA Rulemaking 16-02-007

SIERRA CLUB AND CALIFORNIA ENVIRONMENTAL JUSTICE ALLIANCE OPENING COMMENTS ON PROPOSED DECISION ON 2019-2020 ELECTRIC RESOURCE PORTFOLIOS TO INFORM INTEGRATED RESOURCE PLANS AND TRANSMISSION PLANNING

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In accordance with Rule 14.3 of the Rules of Practice and Procedure of the California Public Utilities Commission ("Commission"), the California Environmental Justice Alliance ("CEJA") and the Sierra Club respectfully submit these comments on the February 21, 2020 Proposed Decision on the 2019-2020 Electric Resource Portfolios to Information Integrated Resource Plans and Transmission Planning ("Proposed Decision" or "PD").

INTRODUCTION AND SUMMARY

The Commission's Proposed Decision contains several fundamental errors that will thwart California's ability to meet its climate and air quality requirements. First, the PD's proposed reference system plan ("RSP") most likely exceeds the greenhouse gas ("GHG") range mandated by the California Air Resources Board ("CARB") because of the models' systematic undercounting of emissions. The Commission should not, and cannot, approve an RSP that does not meet the range required of the energy sector in the Scoping Plan. The proposed RSP is further inconsistent with the requirements of SB 350 and SB 100 because it increases air emissions and fails to set us on a trajectory to meet clean energy and climate requirements. Second, the PD erroneously assumes that gas plants cannot be retired while at the same time failing to analyze the real costs of keeping gas generation online, how to comply with the requirements of SB 100 and SB 350, and the targeted procurement needed to enable swift retirement of the polluting gas generation. Third, the PD wrongly restricts the ability of LSEs to plan to meet more aggressive GHG targets. Fourth, in denying the Petition for Modification that CEJA and Sierra Club submitted with other parties, the Commission fails to require the changes

necessary to prevent new fossil fuel procurement and preserve the parties' rights to challenge such procurement.

Given these major errors in the Proposed Decision, the Commission should revise the PD to ensure that it: (1) sets the appropriate GHG target of 30 MMT or at the very least a target no higher than 38 MMT so California can fall within CARB's mandated GHG range for the electric sector and other climate and air quality requirements; (2) require the analyzes needed for targeted procurement of preferred resources to enable gas plant retirements; (3) allow LSEs to plan for a lower GHG future consistent with SB 350; (4) does not allow any new fossil generation unless it has actual, demonstrated GHG reduction benefits (e.g. energy storage projects that decrease GHG emissions and projects that increase the efficiency or capability of existing units); (5) protects parties' rights to protest fossil procurement and build an evidentiary record about the impacts of such procurement on communities.

In Appendix A to these comments, we propose changes to the PD's Findings of Fact and Conclusions of Law.

DISCUSSION

I. The 46 MMT case fails to meet statutory requirements because it does not fall within the GHG requirements set forth by CARB, fails to reduce air emissions, and fails to set California on a trajectory to meet SB 100 targets.

The PD commits legal error by adopting what it claims is a 46 MMT "optimal portfolio"[1] (hereinafter referred to as the "High GHG Case.") This portfolio must be rejected because it: (1) most likely does not fall within the requirements of the Scoping Plan set by CARB; (2) fails to minimize criteria pollutant emissions; (3) does not set California on a trajectory to meet SB 100's clean energy targets; and (4) fails to meet statutory requirements to not increase emissions when Diablo retires. We explain each of these points in more detail below.

First, the PD errs by adopting what it characterizes as a 46 MMT portfolio because GHG emissions under the portfolio are likely higher than 53 MMT, which does not meet the GHG reductions the energy sector must accomplish under SB 32 to meet CARB's Scoping Plan

[1] PD, p. 2.

mandates. To meet SB 32's GHG reduction requirements, CARB's Scoping Plan requires the electric sector's GHG emissions for 2030 to fall at least within a range between 30-53 MMT.[2] This translates into approximately a 24-42.2 MMT range for the CAISO footprint, assuming CAISO's share of statewide electric sector emissions is about 81%. CARB's Scoping Plan further assumes that additional reductions from the electric sector and other sectors will occur through the cap-and trade program.

The new 46 MMT High GHG Case, which has not been subject to stakeholder review, relies on the SERVM model to project 41.4 MMT and the RESOLVE model to project 37.9 MMT of GHG emissions in 2030.[3] Not only does this discrepancy call the results into question, but they both are likely not sufficient to meet GHG requirements. These GHG levels will not fall within CARB's 24-42.2 MMT range for the CAISO system given the model's systematic undercounting of GHG emissions in both models by over 5 MMT.[4] Despite repeated requests by CEJA, Sierra Club, and other IRP parties for this to be addressed, the most recent portfolio does not appear to have taken action to correct the serious discrepancy between reality and modeling given that this significant delta still exists.

Indeed, the PD's proposed RSP estimates GHG emissions in 2020 as 43.1 MMT in the CAISO area,[5] even though the actual 2019 GHG emissions were 51.05 MMT.[6] This discrepancy cannot be explained by resource changes as the modeling only assumes a small portfolio of primarily solar comes online in 2020.[7] Thus, the PD's High GHG Case may be undercounting GHG emissions by over 7 MMT. Therefore, it is highly likely that the 41.4 MMT level measured in SERVM is *over* 42.2 MMT and thus exceeding the CARB Scoping Plan range. Given all the evidence, we have no confidence that the proposed RSP will meet SB 350's requirement to fall

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[2] CARB 2017 Scoping Plan, p. 31, https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf.
[3] PD, p. 38.
[4] See CEJA and Sierra Club December 2019 Comments, pp. 13-16.
[5] See CPUC, RESOLVE Model Results 2019 RSP, available at https://www.cpuc.ca.gov/General.aspx?id=6442464143. This 2020 number was used in RESOLVE.
[6] http://www.caiso.com/Documents/GreenhouseGasEmissions-TrackingReport-Dec2019.pdf. CARB's 2019 emissions are not available yet, but the 2018 CARB GHG emissions were 63.30 MMT, which translates into approximately 51.3 MMT for the CAISO system. See CARB Mandatory GHG Reporting, 2018 GHG Emissions Data, http://ww2.arb.ca.gov/mrr.data.
[7] PD, p. 36, Figure 1.

within the Scoping Plan's range. This is not a minor discrepancy—this is a major problem that calls into question the Commission's chosen portfolio's compliance with CARB's minimal requirement. Even the PD admits that the High GHG Case may result in excessive GHG emissions, as it states that the Commission "may later suggest a need for modeling a lower 2030 GHG emissions target in order to achieve the desired GHG reductions for the electric sector overall."[8] But the time for a lower emissions target is now. The Commission cannot and should not approve a portfolio that is likely to exceed high end of CARB's range.

Furthermore, it is critical that the Commission realize that the 30-53 MMT range does not include the emission reductions that CARB anticipates occurring economy wide under cap-and-trade. CARB anticipates that between 34-79 MMT of GHG reductions will occur from the cap-and-trade program, and that those "additional reductions [will occur] in the sectors it covers."[9] Problematically, emissions from one of the other key cap-and-trade sectors, the oil and gas sector, have actually *risen* by 3.5% since the program started,[10] which shows that the electric sector must assume an even more significant percentage of the emission reductions anticipated to occur through cap-and-trade.

The Commission cannot and should not approve an RSP that is not likely meet the State's GHG reduction requirements and that will hamper the State's ability to meet future targets. SB 350 requires that any approved plan "ensure" compliance with SB 32's requirements as reflected by CARB.[11] Given that the LSE IRPs will be based on the RSP, the RSP, at bottom, must ensure compliance with SB 32. Therefore, at minimum, the Commission should reject the 46 MMT High GHG Case and any other portfolio with a GHG target over 38 MMT.

Second, in addition to failing to meet the applicable GHG targets set by CARB for the electric sector, the PD commits legal error by choosing a portfolio that *increases* emissions of natural gas generating resources within the state. SB 350 requires that the Commission's IRP process ensure that LSEs "minimize localized air pollutants and other greenhouse gas emissions, with early priority on disadvantaged communities."[12] The High GHG Case in the PD, however,

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[8] PD, p. 38.
[9] CARB Scoping Plan, (Nov. 2017) https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf, p. 31.
[10] https://www.propublica.org/article/cap-and-trade-is-supposed-to-solve-climate-change-but-oil-and-gas-company-emissions-are-up
[11] Cal. Public Util. Code § 454.52(a)(1).
[12] Cal. Public Util. Code § 454.52(a)(1)(H).

increases emissions from combined cycle ("CC"), cogeneration ("Cogen"), and combustion turbine ("CTs") facilities, and projects high emissions in two of the most polluted air basins in the country—South Coast and San Joaquin.[13] The Commission did not conduct an in-depth analysis to determine the best portfolio for minimizing emissions with a priority in disadvantaged communities.[14] Rather, the PD only examines its preferred portfolio, failing to conduct a real analysis to "minimize" air pollution as required by the statute.[15]

Third, the PD further errs by choosing a scenario that does not set California on a path to meeting SB 100's clean energy targets. The PD's High GHG Case, for example, fails to even include the most basic building decarbonization assumptions and does not align with the 2045 forecasts. The PD's High GHG Case also fails to set the State on a trajectory toward meeting its 2030 and future GHG-reduction requirements. In fact, to meet the 2045 case, the High GHG Case has to assume that around 8,800 MW of storage is built in the next ten years, and then that State will build over 45,000 MW in the fifteen years following that time period.[16] This is not a straight line trajectory; this is a major delay of the construction resources necessary today. The High GHG Case largely repeats the same mistakes of the last IRP cycle by assuming business-as-usual, demand-side assumptions, failing to construct the resources necessary to meet our climate and clean energy goals, and recommending a GHG target entirely inconsistent with the reductions necessary to meet the state's GHG reduction requirements in 2030 and beyond.

Fourth, the PD's High GHG Case should be rejected because it *increases* GHGs between 2022 and 2030,[17] which is inconsistent with SB 1090, which requires the Commission to ensure that no increase in emissions results from the retirement of Diablo Nuclear Generating Station.[18]

For all these reasons, the Commission should reject the High GHG Case as inconsistent with State requirements and policy.

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[13] IRP Criteria Pollutant Slides Analysis, p. 16.
[14] Although a general analysis was conducted, it failed to analyze potential changes in emissions with any granularity, such as by air basin. See IRP Criteria Pollutant Slides Analysis, p. 16. We further strongly disagree with the statements minimizing the startup and shutdown emissions from natural gas plants because the very real impact these emissions have on communities breathing unhealthy air. See CEJA and Sierra Club December 13, 2019 Comments.
[15] Cal. Public Util. Code § 454.52(a)(1)(H).
[16] See CPUC, RESOLVE Model Results 2019 RSP, available at https://www.cpuc.ca.gov/General.aspx?id=6442464143.
[17] *See* PD, Table 7, showing increases in GHGs from 2022 to 2030 using both RESOLVE and SERVM.
[18] Per SB 1090, Section 2, (b) "The commission shall ensure that integrated resource plans are designed to avoid any increase in emissions of greenhouse gases as a result of the retirement of the Diablo Canyon Units 1 and 2 powerplant."

II. The PD's assumption that fossil fuel plants will not retire is inconsistent with state law and policy, based on an incomplete economic analysis, and should be revised as the Commission determines the targeted clean energy procurement needed to retire polluting generation as soon as possible.

The PD incorrectly assumes that the existing fossil fuel fleet should be retained within the planning horizon. For numerous reasons, this assumption should be revised, and the Commission should direct the additional analyzes needed to properly account for the true cost of gas generation and to procure clean energy alternatives.

First, retention of the fossil fuel fleet is in error because it is inconsistent with mandates of SB 100 and SB 350 to phase out the use of and reliance on fossil fuel resources. As noted by Staff, maintaining gas plants on the system allows for the possibility that they will be dispatched to meet out-of-state loads.[19] The existing fossil fuel fleet is currently harming impacted communities and imposing a disproportionate risk on already over-burdened disadvantaged communities. In particular, local reliability areas of San Joaquin Valley and Southern California include fossil-fueled generating plants operating in or around a number of disadvantaged communities that breathe some of the most polluted air in the country.[20] The failure to address how to retire dirty resources in these polluted areas is inconsistent with the SB 350 mandate to minimize emissions with a priority for disadvantaged communities.[21]

Second, the PD's assumption about gas retention lacks evidentiary support because, as we have previously commented, RESOLVE's limited analysis of operational costs of fossil fuel facilities ignores the significant costs of keeping old gas plants running and cycling. Ignored externalities include both health costs throughout the State, as gas plants continued to pollute, and even more serious and direct health risks to neighboring communities impacted by emissions from fossil plants.[22] RESOLVE does not even consider these substantial negative externalities when it determines whether or not to keep gas plants on-line. Although this omission is a major flaw in the modeling, PD fails to address it and is therefore in error.

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[19] See November 2019 ALJ Ruling, Attachment A, Slide 46.
[20] *See* PSE Healthy Energy, California Power Map, https://www.psehealthyenergy.org/california-power-map/ (showing plants located in LCR areas); CalEnviroScreen 3.0 Map, http://oehha.maps.arcgis.com/apps/View/index.html?appid=c3e4e4e1d115468390cf61d9db83efc4; American Lung Association State of the Air Report, https://www.lung.org/our-initiatives/healthy-air/sota/.
[21] Cal. Public Util. Code § 454.52(a)(1)(H).
[22] *See* CEJA, Sierra Club, and EDF Comments on Proposed RSP Scenarios (March 5, 2019).

Third, PD errs by failing to order development of the tools necessary to optimize the replacement of natural gas resources used to provide local capacity. To be complete, the PD's analysis should include an optimization that compares the cost of existing thermal resources, including air quality impacts, to the cost of replacement DERs and other renewable and GHG-free resources to be used in this proceeding. This analysis should fully value DERs' ability to respond more quickly than traditional resources. As the proceeding related to the proposed Puente Power Plant demonstrates, procurement of preferred resources can replace the need for the operation of a fossil fuel plant in an LCR area.[23] To ensure California is able to reduce its reliance on gas, the Commission should conduct LCR-specific analyses of how best to procure preferred resources to facilitate the eventual complete phase-out of gas resources. Not only will the targeted procurement of preferred resources likely save ratepayers money, but also it will help minimize air pollution and set California on the path mandated by SB 100. Indeed, without this prioritization, LSEs may procure the wrong resources in the wrong places such that the State will not be able to meet its 2045 goals and requirements. The Commission should therefore revise the PD to ensure that such analyses of targeted procurement are conducted. This analysis is needed now and should not be delayed,

In sum, the Commission's failure in the PD to require modeling of, and plan for retirement of polluting gas plants violates California climate law and policy and imposes a persistent pollution burden on communities that have already borne the brunt of the state's use of fossil fuel. The Commission should remedy these major errors by revising the PD to order the analyses needed to procure preferred resources and retire polluting gas plants.

III. The Commission should allow LSEs to plan for a lower GHG future that is consistent with SB 350.

The PD further errs by not allowing LSEs flexibility to present plans that include assumptions that are more aggressive than the 46 MMT scenario. SB 350 requires utilities to present plans that ensure that GHG requirements are met and air emission are minimized. The PD's High GHG Case, as described above, does not meet these most basic requirements. Yet, the PD also fails to allow LSEs to mitigate this error by filing scenarios that meet these

[23] Moorpark Sub-Area Local Capacity Alternative Study, August 16, 2017 (available at https://www.caiso.com/Documents/Aug16_2017_MoorparkSub-AreaLocalCapacityRequirementStudy-PuentePowerProject_15-AFC-01.pdf)

requirements. Although we appreciate the need for the LSEs to use a uniform set of assumptions for the required portfolio, we also see significant value in filings such as SCE's IRP, which demonstrated the changes necessary to meet a lower GHG threshold. Notably, the 2045 Framing Study is largely consistent with the assessment that SCE, CEJA, and Sierra Club share—i.e. that California will need more transportation electrification, building electrification, and energy efficiency to meet GHG requirements. While we continue to believe having a reference case based only on common inputs makes sense, this additional flexibility to evaluate alternative plans with lower GHG values will provide LSEs the necessary flexibility to present plans that ensure that SB 350's requirements are met.

IV. The PD errs by failing to ensure that new fossil generation that increase GHGs are not allowed and by failing to uphold parties' rights to protest new fossil generation.

The Proposed Decision errs by denying in its entirety the Petition of CEJA, Sierra Club, Defenders of Wildlife, and the Public Advocates Office ("Joint Parties") to Modify D.19-11-016 ("Decision").[24] The Joint Parties' Petition sought important and discrete modifications to the Decision to ensure that any proposed fossil generation that increases GHG emissions is not allowed and that the rights of parties to protest new fossil procurement are preserved. The Commission's reasoning in denying the Petition is incorrect in several respects and should be revised.

1. Minor modifications of D.19-11-016 are needed to ensure that the Commission does not allow new fossil generation that increases GHGs.

In denying Joint Parties' Petition, the Commission states that "[t]he intent of the decision was to discourage new fossil generation, while still allowing some creative projects that may utilize some amount of fossil fuels, but represents an environmental improvement over fossil-only resources."[25] The Commission also states that it "did not intend to encourage hybrid projects that are predominantly conventional in nature, such as a large peaker plant with a nominal amount of co-located battery storage, or other similar configurations."[26] But the

[24] See Petition of the California Environmental Justice Alliance, Sierra Club, Defenders of Wildlife and Public Advocates Office to Modify Decision 19-11-016 (Dec. 11, 2019); UCS, EDF, and NRDC Filed a Joint Response in Support of the Joint Parties' Petition.
[25] PD, p. 69.
[26] PD, p. 69.

Commission has not translated this intent into appropriate direction for future procurement. As it currently stands, without the modifications proposed by the Joint Parties in their Petition, D.19-11-016 could allow new generation *even if such procurement increases GHGs*. Likewise, the Commission states that it need not draw any "bright lines" against certain fossil resources because such limits may exclude good projects.[27] But some form of line-drawing is necessary to ensure that any new fossil procurement is contained to *only resources that will not result in more GHGs* such as energy storage projects that decrease GHG emissions and projects that increase the efficiency or capability of existing units. As written, the Decision does not provide this fundamental safeguard. The Commission must therefore modify the Decision accordingly or risk enabling generation of more GHG emissions than would otherwise occur.

Critically, and contrary to the PD's characterization, the modifications proposed by the Joint Parties, *do* allow for some "creative projects" with GHG-reduction benefits that the Commission seeks to encourage. For example, the Joint Parties' Petition proposed the following modification (as indicated in underlined text) "… storage facilities co-located with existing fossil-fueled facilities may represent GHG emissions improvements over the status quo and, to the extent they actually reduce emissions, are desirable."[28] Such a modification to D.19-11-016, along with the others proposed in Appendix A to the Petition, ensure that any fossil generation paired with storage is only allowed if there are actual—rather than merely speculative—GHG emissions reductions. Notably, the Joint Parties' proposed modifications allow for projects proposed by Range. Indeed, Range has not requested that *all* fossil fuel resources be allowed as long as there may be some storage. Rather, its concern is for storage or hybrid resources that rely on a small amount of fossil gas in the *storage* process. Nowhere did Range broadly request procurement of additional fossil-fueled *generation* paired with storage. D.19-11-016's direction is thus contrary to Range's focus, which is on assuring that all types of energy storage can be procured to meet the procurement targets. Thus, the PD errs when it states that it is "not possible" to remove the loopholes for gas contained in D.19-11-016 without also prohibiting desirable projects.[29] Careful modifications of D.19-11-016 that strike the right balance *are* possible and necessary to ensure new fossil generation does not increase GHGs. The

[27] PD, p. 69.
[28] Joint Parties Petition, Appendix A.
[29] PD, p. 69.

Commission must refine its direction in D.19-11-016 accordingly to specify that actual GHG reductions must be demonstrated.

2. The Commission must modify D.19-11-016 to preserve parties' rights to protest procurement and build evidentiary records to inform the Commission's decisions.

The PD also errs by denying the Joint Parties' Petition for Modification of D.19-11-016 to ensure protection of parties' procedural rights—especially the rights of communities directly impacted by polluting fossil fuel facilities. The Commission reasons that its expedited procurement approval process is sound because parties can protest IOU procurement at the cost recovery stage and because it has minimal authority related to CCAs and ESPs. This is simply incorrect.

First, as explained in the Joint Parties' Petition, D.19-11-016 inappropriately allows IOUs to submit advice letters instead of actual applications, and requires ESPs and CCA to provide mere "summaries."[30] These processes fly in the face of longstanding protections that both the Legislature and Commission have developed over many years to ensure parties can protest fossil fuel procurement and inform the Commission with evidence about viable clean energy alternatives and the impacts of gas generation on vulnerable communities. With respect to IOU procurement, advice letters are not the appropriate vehicle for IOU procurement. Parties protesting an advice letter are denied the opportunity to test LSE evidence, conduct discovery, or otherwise develop an evidentiary record. IOUs can thus proceed with procurement of fossil fuel resources without any requirement that they respond to contrary evidence presented by other parties. The Commission states in the PD that "if the Commission or other parties see significant problems with the procurement choices of the investor-owned utilities (IOUs), the Commission has the option not to approve those contracts for cost recovery."[31] But such an "option" at the cost recovery stage does not enable communities to protest the actual procurement and build the record that would be vital to participating meaningfully in the cost recovery stage. Because neither the advice letter process nor the cost recovery process would allow parties to seek data, or submit evidence, regarding the impacts of harmful projects, these processes are simply not adequate substitutes for the full application process.

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[30] Joint Parties Petition, pp. 13-16,
[31] PD, p. 69.

Second, the PD states that because the Commission "does not separately review the procurement choices of the CCAs and ESPs" its "policy guidance" to CCAs and ESPs is sufficient. [32] But the Commission can and must do more to ensure these LSEs comply with GHG reduction targets and other climate goals. Specifically, the Commission should require ESPs and CCAs that elect to procure new fossil fuel capacity to explain in their 2020 IRP filings how the proposed fossil fuel procurement is consistent with the requirements of Section 454.52(a)(1), including the requirement that the LSE's IRP meets the greenhouse gas reduction targets established by CARB. Such a requirement would at the very least ensure CCAs and ESPs justify their procurement. It will also enable affected parties to challenge the need for any new fossil fuel generation that those LSEs might propose.[33]

Members of CEJA and the Sierra Club live throughout the State and breathe some of the nation's most polluted air. These members will be directly impacted if the Commission allows for procurement of fossil fuel plants without providing a meaningful participation process. The Commission must protect parties' rights to challenge such polluting projects before they are approved. Thus, if the Commission does not appropriately modify D.19-11-016 to close the problematic loopholes for new fossil fuel procurement described above, the Commission should, in the alternative, modify the D.19-11-016 to (1) require IOUs that elect to procure new fossil fuel capacity to submit applications, and (2) require ESPs and CCAs that elect to procure new fossil fuel capacity to explain in their 2020 IRP filings how the proposed fossil fuel procurement is consistent with the requirements of Section 454.52(a)(1), including the requirement that the LSE's IRP meets the greenhouse gas reduction targets established by CARB.

CONCLUSION

For the reasons stated above, the PD is in error, and the Commission should revise the PD to ensure that it (1) sets the appropriate GHG target of 30 MMT or at the very least a target no higher than 38 MMT so California can fall within CARB's mandated GHG range for the electric sector and other climate and air quality requirements; (2) conducts the analyzes needed for

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[32] PD, pp. 69-70.
[33] While the language qualifies that "new gas-only resources" are excepted from this process, the existence of the loopholes described above (i.e. for new gas in existing facilities and new gas if paired with storage) means that the procurement of certain new gas resources can proceed under the Decision without the need for an application.

targeted procurement of preferred resources to enable gas plant retirements; (3) allows LSEs to plan for a lower GHG future consistent with SB 350; (4) does not allow any new fossil generation unless it has actual, demonstrated GHG reduction benefits (e.g. energy storage projects that decrease GHG emissions and projects that increase the efficiency or capability of existing units); (5) protects parties' rights to protest fossil procurement and build an evidentiary record about the impacts of such procurement on communities. These changes are needed in order for the Commission to comply with governing state climate and air quality laws and policies.

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APPENDIX A:
PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW, AND ORDER

Findings of Fact

6. The 30 MMT ~~38 MMT, and 46 MMT)~~ GHG emissions scenario run by Commission staff falls within the 30-53 MMT by 2030 range for the electric sector established by CARB pursuant to SB 350. The 38MMT scenario likely falls within this range, and the 46MMT scenario likely exceeds this range.

[new paragraph] The new 46 MMT case relies on the SERVM model to project 41.4 MMT and the RESOLVE model to project 37.9 MMT of GHG emissions in 2030. These GHG levels will not fall within CARB's 24-42.2 MMT range for the CAISO system given the model's systematic undercounting of GHG emissions in both models by over 5 MMT.

11. Limiting electric sector emissions to ~~46~~ 30 MMT in 2030 would put the sector on the straight-line trajectory to achieving estimates of the necessary emissions in 2045 to reach the state's zero-emissions goals set forth in SB 100.

29. D.19-11-016 prohibited the construction of new natural-gas-only resources on new sites to meet the procurement needs identified, but did not prohibit new resources that use some amount of natural gas as part of hybrid configurations. D.19-11-016 should be modified to clarify that any new gas, if sited with storage as part of a hybrid configuration, is only allowed if the LSE seeking to procure such gas can demonstrate that it results in lower GHG emissions overall.

Conclusions of Law

3. The RESOLVE and SERVM models were iteratively ~~and appropriately~~ calibrated ~~sufficient~~ for the Commission's reliance to produce the 2019-2020 IRP cycle analysis of an RSP. Due to the differences between the models, more calibration and comparison to actual emissions is necessary.

7. It is reasonable for the Commission to adopt an electric sector GHG target in 2030 of ~~46~~30 MMT at this time.

[new paragraph] The Commission must approve an RSP that meets the State's GHG reduction requirements. SB 350 requires that any approved plan "ensure" compliance with SB 32's requirements as reflected by CARB. Given that the LSE IRPs will be based on the RSP, the RSP must ensure compliance with SB 32. Therefore, the Commission must reject the 46 MMT case and any other portfolio with a GHG target over 38 MMT.

[new paragraph] To meet SB 32's GHG reduction requirements, CARB's Scoping Plan requires the electric sector's GHG emissions for 2030 to fall at least within a range between 30-53 MMT. This corresponds to an approximate 24-42.2 MMT range for the CAISO footprint, assuming CAISO's share of statewide electric sector emissions is about 81%. CARB's Scoping Plan further assumes that additional reductions from the electric sector and other sectors will occur through the cap-and trade program.

[[new paragraph]] SB 1090 requires the Commission to ensure that no increase in GHG emissions results from the retirement of Diablo Nuclear Generating Station. The PD's proposed RSP *increases* GHGs between 2022 and 2030, which is inconsistent with SB 1090.

11. Commission staff's analysis of a new 2019-2020 RSP recommendation, in response to comments of parties, as described in this decision, and adding the additional 2 GW of capacity in RESOLVE, does not represents a reasonable portfolio for LSEs to collectively plan for by 2030 because it will not ensure that California will meet mandated GHG targets in 2030 and 2045.

12. The new 2019-2020 RSP new resource buildout will be a challenge to procure and build by 2030, as it represents an approximately 30 percent increase in wind capacity, a more-than doubling of solar capacity, a tripling of battery storage capacity, and a doubling of pumped storage, or other long-duration storage, capacity compared to current levels. Nevertheless, a lower GHG is needed along with additional resource buildout, in order for the State to comply with its climate laws and policies.

28. The Commission should ~~discourage~~ not allow investment in predominantly fossil-fueled resources with nominal amounts of other resource types (*e.g.,* storage) that do not demonstrate GHG reduction to satisfy the procurement needs identified in D.19-11-016.

29. The December 11, 2019 PFM of CEJA, Sierra Club, DOW, and Cal Advocates of D.19-11-016 should be ~~denied~~ granted.

30. The January 24, 2020 PFM of GenOn Holdings of D.19-11-016 should be denied as unnecessary, but the Commission should support the joint request of GenOn and the City of Oxnard for a three-year OTC extension for the Ormond Beach Generating Station at the Water Board.

O R D E R
IT IS ORDERED that:

1. The Commission adopts the greenhouse gas emissions target for the electric sector of ~~46~~ 30 million metric tons in 2030, within the range for the sector established by the California Air Resources Board. The Commission applies this target to the investor-owned utilities, community choice aggregators, electric service providers, and electric cooperatives under its purview for the integrated resource planning process.

10. The December 11, 2019 Petition for Modification of Decision 19-11-016 of the California Environmental Justice Alliance, Sierra Club, Defenders of Wildlife, and the Public Advocates' Office is ~~denied~~ granted.

[[new paragraph]] Energy Division will conduct analyzes needed for targeted procurement of preferred resources that enable gas plant retirements.

[[new paragraph]] Energy Division will revise the RESOLVE model to include externalities of retaining gas generation.